ACETAMINOPHEN: SOMETIMES OLD THINGS BECOME NEW AGAIN!

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Acetaminophen isn't NSAID but is an effective analgesic and antipyretic, and has little or no anti-inflammatory and no antiplatelate activity.
The mechanism of action hasn't been fully understood, but it is now accepted that acetaminophen has effects on the periphery, spinal cord and brain levels.

1- In the periphery acetaminophen metabolism by proxidase produces reactive compounds that inhibit brady kinin-generated impulses within nociceptive fibers.

2- At the spinal cord level acetaminophen has been shown to antagonize neurotransmission via NMDA. substance-p and nitric oxide pathway.

3- In animal models, acetaminophen has been demonstrated to weakly inhibit COX-III in the brain.

It has been hypothesized that subsequent reduction in PG production may result in an increase in the activity of descending serotonergic pathways, so modulating nociceptive inputs.

Acetaminophen is a well-tolerated drug with few side effects in all age groups. Unlike nonsteroidal agents it is safe in pregnancy and children, down to neonatal ages. At recommended doses it is not associated with the increased incidence of nausea, vomiting, respiratory depression, ileus and other side effects as seen with opioids or the serious gastrointestinal, hematological, renal and cardiovascular side effects associated with NSAIDs including the COX-II inhibitors.

Acetaminophen has been shown to have an efficacy equal to aspirin on a dose-per-dose basis and no propensity to be addictive, even in frequent applications. Hepatotoxicity is relatively rare, but acetaminophen has been found to have a narrow therapeutic window.

Acetaminophen has analgesic effects in acute and chronic conditions and cancer pain.